

REMARKS

Reconsideration and withdrawal of the rejections of the claimed invention is respectfully requested in view of the amendments, remarks and enclosures herewith, which place the application in condition for allowance.

I. STATUS OF CLAIMS AND FORMAL MATTERS

Claims 16, 21, 23, and 28-32 would be pending in this application upon entry of this amendment. Independent claim 30 has been amended to insert the element of previous claim 24 (“wherein the ALS inhibitor is a sulfonylurea.”) and the reference to geminal surfactants of formula (II) and formula (III) has been deleted. Dependent claims 32 has been amended in accordance with the scope of amended claim 30. With entry of this amendment, claims 15, 17, 18, 20, 22 and 24 would be superfluous and have been cancelled. No new matter has been added by this amendment.

Reasons amendment to the claims should be entered

MPEP 714.13, section II states in part that “[e]xcept where an amendment merely cancels claims, adopts examiner suggestions, removes issues for appeal, or in some other way requires only a cursory review by the examiner, compliance with the requirement of a showing under 37 CFR 1.116(b)(3) is expected in all amendments after final rejection.” (emphasis added).

During the interview of 10 July 2009, it appeared that the main stumbling block precluding allowance of the claims was the breadth of the a) compounds and the b) compounds. With the amendment to claim 30 (and subsequent dependent claims), **the Examiner’s suggestions have been adopted** and the amendments serve to **narrow the issues for Appeal** if the claims are not otherwise allowed.

As this amendment qualifies for entry under the exceptions set forth in MPEP 714.13, section II, no explanation under 37 CFR 1.116(b)(3) is necessary, but in the interest of compact prosecution, the applicants state that the “good and sufficient reasons why the amendment is necessary and was not earlier presented.” is that the applicants still believe that the claims even without entry of this amendment are allowable over the combination of Pappas-Fader and JP 10-330202 (and in fact plan on filing a continuation application if the claims as amended above are allowed).

However, in order to advance prosecution, the applicants are willing to have the above amendments entered into the claim in order to obtain a Notice of Allowance or at the very least simplify matters for Appeal, i.e. the Appeal after entry of the above amendments would be over narrower subject matter and fewer claims (8 claims with entry vs. 15 claims without entry).

The applicants reserve the right to further pursue the scope of the claims as previously filed in a continuation or divisional application.

It is submitted that the claims, herewith and as originally presented, are patentably distinct over the prior art cited in the Office Action, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112.

II. THE 35 U.S.C. 103(a) REJECTION HAS BEEN OVERCOME

Claims 15-18, 20-25, 28-32 were rejected as allegedly being obvious by Pappas-Fader et al. (US 5,736,486 - "Pappas-Fader") and Kazutomi et al. (JP 10-330202 - "Kazutomi"). The applicants request reconsideration of this rejection for the following reasons. (The arguments presented below are even more applicable for the claims as amended as the scope of the active ingredient is now directed to sulfonylureas (such as iodosulfuron – see claim 29) and the scope of the other component of the liquid formulation is the sulfosuccinates of formula (I). The arguments below stretching from page 8 through page 11, line 4 are essentially the same as the arguments presented in the response of 18 May 2009. Additional comments start on page 11, line 5.

While the applicants maintain the positions taken in their Appeal Brief which is incorporated here by reference, the applicants provide three additional points for consideration by the Examiner in order to clarify a few positions which have been lost during the course of prosecution (i.e. to date there have been eight (8) Office Actions on the merits and a restriction requirement while the applicants have only filed one RCE during prosecution).

Unexpected Results

First, the applicants note that they have provided evidence of unexpected results for their combination of elements which constitute the claimed liquid formulation which has not been refuted by the Examiner. As the unexpected results appear to be clear cut to one of ordinary skill in the art, the applicants can only surmise that the Examiner was having difficulty reading the Tables within the specification.

These tables have been reformulated in the chart below (see next page) in order to address only the elected combination of sulfosuccinates and ALS inhibitors. The applicants have added a column entitled “Loss in %” and “Stable formulation?” to further illustrate the unexpected results.

	RESULTS of Table 1				RESULTS of Table 2	
Recipe No.	Ingredient	III	VIII	IX	1	2
Active Ingredients	Iodosulfuron	7.46	4.65	4.61	1.40	1.40
	Fenoxaprop-ethyl		7.94	8.01	11.08	11.08
	Mefenpyr-diethyl		3.05	3.08	4.17	4.17
Stabilizing polycarboxylic acids, e.g. sulfosuccinates	Triton GR 7 ME®	81.98	84.36		NONE	NONE
	Na-DOS			24.99		
Solvents	Propylene carbonate	10.56			83.35	73.35
	Edenor MESU®			39.52		
Surfactants	Soprophor CY8®			19.79		
	Genapol X-060®					10.0
The initial values and final values (g of iodosulfuron in the formulation were determined by HPLC)	Initial value (Iodosulfuron)	7.32	4.31	3.14	1.29	1.35
	Final value (Iodosulfuron), i.e. after storage at T = 54°C, 14 days	7.31	4.17	3.07	0.32	<0.05
	Loss in %	0.1	3.2	2.2	75.2	>96.3
Comment	Stable formulation?	YES	YES	YES	NO	NO

As can be seen from the above data, the formulation of the invention resulted in stable formulations and much less loss of iodosulfuron compared with similar formulations lacking iodosulfuron.

Restriction and Election of Species

Since the restriction and election of species occurred long ago (10 October 2002), the applicants reiterate that the claims under examination are related to the species defined by claim 29 (component a) is sodium di-(2-ethylhexyl)sulfosuccinate) and the ALS inhibitor is iodosulfuron-methyl or its sodium salt), i.e. this elected combination was deemed by the Examiner as representing a patentably distinct species over other possible combinations within the scope of the applicants’ originally filed claims.

As such, it is incongruous that a reference (Pappas-Faden) which is acknowledged to lack a proper teaching for the sulfosuccinate or ALS inhibitor, much less the specific combination elected can be an obvious variation of the applicants' claimed invention as examined when other variations have been held to be patentably distinct inventions.

Credible explanation for teaching of solution as related to iodosulfuron in Pappen-Fader still has not been disclosed in the Office Action

Pappen-Faden is still alleged to be directed to solutions as in the applicants' claimed invention, but there is no evidence for this assertion. The passage from col. 10, lines 24-44 from Pappen-Faden ("Useful formulations include liquids such as solutions... - col. 10, line 29) is relied upon in the Office Action, but this overlooks the fact that when considering the reference as a whole, it is clear that Pappen-Faden is directed toward herbicidal mixture of ***anilofos with propanil, or one or more of the compounds*** selected from azimsulfuron, metsulfuron methyl, chlorimuron ethyl, bensulfuron methyl, ethametsulfuron methyl, nicosulfuron, rimsulfuron, sulfometuron methyl, thifensulfuron methyl, tribenuron methyl, triflusulfuron methyl, methyl 2-[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl]amino]sulfonyl]-6-(trifluoro-methyl)-3-pyridinecarboxylate, chlorsulfuron, and hexazinone. (see Abstract).

As there is no requirement that iodosulfuron (or any sulfuron-type herbicide) be present in the Pappen-Faden mixture, there is no evidence that the mention of solution by Pappen-Faden applies to an iodosulfuron mixture.

The Office Action cited col. 11, lines 9-29 as evidence of formation of a solution, but then overlooks the very next paragraph (see especially lines 30-35) in Pappen-Faden which contradicts that the reference to a solution in lines 9-29 applies to iodosulfuron:

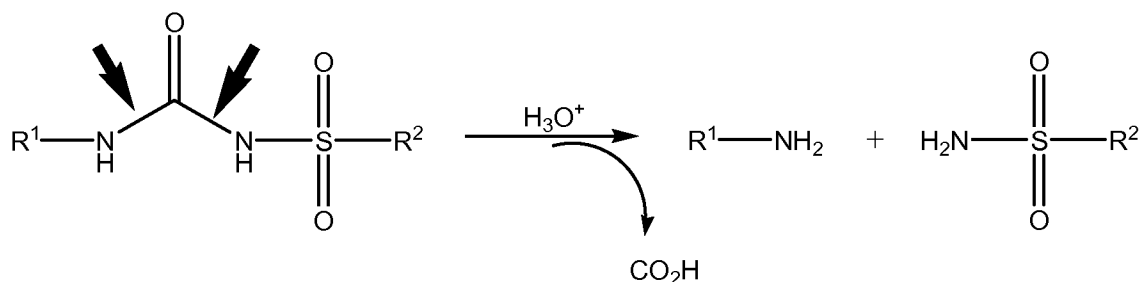
"Solutions, including emulsifiable concentrates, can be prepared by simply mixing the ingredients. Chemically stabilized aqueous sulfonylurea or agriculturally suitable ***sulfonylurea salt dispersions*** are taught in U.S. Pat. No. 4,936,900. Solution formulations of sulfonylureas with improved chemical stability are taught in U.S. Pat. No. 4,599,412 (this patent requires the contacting of the formulation with ***molecular sieves*** to achieve solution formulation)." One of ordinary skill in the art would glean from this paragraph that dispersions not solutions are intended or the use of molecular sieves would be required to achieve a solution with iodosulfuron.

With regard to the latter, one of ordinary skill in the art would not regard a composition which at best would require *anilofos, iodosulfuron and molecular sieves* to be an obvious variant of composition which only requires iodosulfuron and sodium di-(2-ethylhexyl)sulfosuccinate.

Additional comments

(1) Both the Pappas-Fader and Kazutomi refer to an aqueous suspension which is apparently being held to be equivalent to the liquid formulation of the invention and is the link relied upon in the Office Action for combining the references.

However, with regard to sulfonylurea compounds the state of the art is such that one of ordinary skill in the art would not be directed toward using aqueous suspensions because of the sensitivity of these compounds to decomposition via hydrolysis (see diagram below):



Therefore, Pappas-Fader and Kazutomi do not contradict the state of the art with respect to the use of aqueous suspensions and sulfonylurea herbicides, i.e. an expectation that a great deal of sulfonylurea would be lost to degradation (which is illustrated in the table above “Results in Table 2” columns).

(2) The applicants disagree with the statement on page 6 of the Office Action which stated “[t]he alkylsulfosuccinate have not been shown to enhance the stability of sulfonylurea compounds.” as this is precisely what the data in the table above shows.

(3) Consideration of the Pappas-Fader as a whole is especially relevant in this instance in that the reference is directed toward anifolos in a synergistic combination with another herbicides and does not teach or suggest the use of a sulfosuccinate to stabilize a sulfonylurea herbicide (nor does the passage within Pappas-Fader to U.S. Patents 4,936,900 or 4,599,912 teach the applicants’ use of sulfosuccinate to achieve stabilization of a sulfonylurea herbicide) or that stabilization is even necessary when a sulfonylurea is used in combination with anifolos.

(4) The Office Action stated that Kazutomi (referred to as Yasi in the OA) was relied upon to show that alkylsulfosuccinate compounds such as octyl sulfosuccinate are employed in herbicide compositions (see page 6). However, any number of compounds, excipients and additives can possibly be added to an herbicidal composition, i.e. this genus of potential compounds which can be added to a herbicidal composition represents an infinite number of solutions to a problem and not a finite number.

Kazutomi lacks any impetus for the use of a sulfosuccinate compound over any of the other possible compounds described in Kazutomi for combination with synergistic anifolos + second herbicide compositions of Pappas-Fader. (In fact, based on the “a compound which can be added to an herbicide composition” logic, one of ordinary skill in the art would not even have been directed to use Kazutomi as a reference over a general herbicide dictionary, i.e. whereas the Examiner has a copy of the answer key (“the claims”), the person of ordinary skill in the art does not have this luxury.)

In addition, there is nothing within Kazutomi or Pappas-Fader which suggests the unexpected stability of sulfonylurea compounds in liquid solution when a sulfosuccinate is also present.

CONCLUSION

In view of the remarks and amendments herewith, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are earnestly solicited. The undersigned looks forward to hearing favorably from the Examiner at an early date, and, the Examiner is invited to telephonically contact the undersigned to advance prosecution.

Respectfully submitted,
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